

ABB industrial drives
ACS880-37, cabinet-built low harmonic single drives,
250 to 3200 kW



The ACS880-37 is part of ABB's all-compatible drives portfolio. This drive is ideal for handling low harmonic requirements in demanding industrial applications.



Power and productivity
for a better world™



The innovation behind all-compatibility is ABB's common drives architecture, designed to simplify operation, optimize energy efficiency and maximize output.

Simplifying your world without limiting your possibilities

Our cabinet-built ACS880-37 low harmonic single drives are used in industries such as oil and gas, chemical, mining, water and wastewater, cement and metals. The drive is compatible with a wide range of applications including pumps and fans, extruders, conveyors and compressors. The drives produce exceptionally low harmonic content in the drive input. This is achieved without external filters or multi-pulse transformers. At the heart of the drive is direct torque control (DTC), ABB's premier motor control technology. The extensive range of selectable features include built-in EMC filters, du/dt filters and sine filters. Other options include encoders, resolvers, a remote monitoring tool as well as application-specific software. Integrated safety features reduce the need for external safety components. Application programming capability based on IEC 61131-3 is embedded inside the

drive for making the application run more efficiently, without a separate programmable controller. Multiple drives can be daisy chained or synchronized drive-to-drive communication.

Learn it once, use it everywhere

The common drives architecture features the same control panel, parameter menu structure, universal accessories and engineering tools. The new control panel is equipped with an intuitive and high-resolution control display that enables easy navigation. Many flexible data visualizations including bar charts, histograms and trend graphs help users to analyze processes. The menus and messages are customizable for the specific terminology of different applications. An integrated USB port allows easy connection to the Drive composer PC tool, which offers fast and harmonized startup, commissioning and monitoring. The built-in energy calculators, including used and saved kWh, CO₂ reduction and money saved, help the user fine-tune processes to ensure optimal energy use. The energy optimizer control mode ensures the maximum torque per ampere, reducing energy drawn from the supply. The drive also offers built-in service features.



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Technical data

Voltage and power range	3-phase, 380 to 690 V +10/-10% 250 to 3200 kW
Frequency	50/60 Hz ±5%
Power factor	cosφ1 = 1 (fundamental), cosφ1 = 0.99 (total)
Degree of protection	IP22, IP42, IP54 (UL type 12)
Ambient temperature	0 to +50 °C, (>40 °C with derating)
Compliance	CE, UL, cUL, EAC, CSA, C-Tick
Safety (TÜV Nord certified)	Safe torque off (STO), safe stop 1 (SS1), safely-limited speed (SLS), safe brake control (SBC) and safe maximum speed (SMS), safe stop emergency (SSE), prevention of unexpected startup (POUS)
EMC	According to IEC 61800-3, class C3 and C2 as internal option
TDHi (total harmonic distortion of current)	< 5%
Control connections	Two analog inputs, two analog outputs, six digital inputs including thermistor input, two digital inputs/outputs, three relay outputs, digital input interlock, drive-to-drive link (or Modbus RTU), safe torque off (STO), external 24 V DC supply input, memory unit connection, USB via control panel

Control and communication options

Fieldbus adapter modules	PROFIBUS DP, DeviceNet™, CANopen, EtherNet/IP™, Modbus TCP, PROFINET IO, EtherCAT®, Modbus RTU, PowerLink, ControlNet
I/O extension modules	FIO-01: four digital inputs/outputs, two relay outputs FIO-11: three analog inputs, one analog output, two digital inputs/outputs FDCO-01, FDCO-02: DDCS communication options
Feedback modules	HTL pulse encoder, TTL pulse encoder, absolute encoder, resolver
PC tools	Drive composer entry Drive composer pro

For more information please contact your local ABB representative or visit:

www.abb.com/drives
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ACS880 single drives web page

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